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REPORT

OF THE

ILLUMINATING POWER

AND

CHEMICAL QUALITY

OF THE

GAS SUPPLIED TO THE CITY OF LONDON

DURING THE

AUTUMN QUARTER OF 1866.

BY

DR. LETHEBY,

MEDICAL OFFICER OF HEALTH AND GAS ANALYST FOR THE CITY OF LONDON.

LONDON:
M. LOWNDS, PRINTER, FENCHURCH STREET, CITY.

1866.

At a Meeting of the Commissioners of Sewers of the City of London, held at the Guildhall of the said City, on Tuesday, December 4th, 1866:—

Dr. LETHEBY having laid before the Court his Quarterly Report of the Quality of the Gas supplied to the City—

It was ordered to be Printed, and a Copy to be sent to every Member of this Court, and of the Court of Common Council.

JOSEPH DAW,
Principal Clerk.

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To the Honourable Commissioners of Sewers of the City of London.

Gentlemen,

In the course of the Quarter which expired on Saturday last, there were 695 examinations of the Illuminating Power of the Gas supplied to the City,—250 of which were of the Great Central Gas, 222 of the Chartered, and 223 of the

City. Each examination was the average result of ten observations, and the Gas was burnt at the rate of five cubic feet per hour from a Sugg's steotite Argand burner of fifteen holes with a seven-inch chimney. The results were as follows:—

ILLUMINATING POWER IN STANDARD SPERM CANDLES.

GAS OF	Max.	Min.	Average.
Great Central Company	15·47	12·55	13·89
Chartered Company.....	16·95	12·18	14·19
City of London Company	15·64	13·27	14·17

In the corresponding quarter of the last three years the average Illuminating Power of the Great Central Gas was equal to that of 13·47 standard sperm candles; of the Chartered, to 13·12; and of the City Company, to 14·10. It appears, therefore, that, during the last quarter, the Illuminating Power of the Gas supplied to the City has been a little above the average of the last three years; and that it has not at any time been less than the standard of the Act of Parliament,—the average power of it having ranged from 16 to 18 per cent. above the requirements of the Act.

As regards the chemical quality of the Gas, I have to report that I have not at any time found it charged with sulphuretted hydrogen, and, excepting

in the Chartered Gas, there has never been an excess of ammonia. The amount of sulphur in the Gas has been very variable, as will be seen from the following table:—

GAS OF	No. of Observations.		Grains of Sulphur per 100 Cubic Feet.		
	Total.	When in excess.	Max.	Min.	Average.
Great Central Company	53	50	29·93	16·98	23·39
Chartered Company	60	8	22·38	10·43	17·15
City of London Company	52	18	24·11	8·44	17·14

So that, of the 165 testings of the Gas of the three Companies, 76, or nearly half, were found to yield an excess of sulphur. The chief excess has been in the Gas of the Great Central Company, for on fifty out of fifty-three occasions when it was tested, it furnished more than 20 grains per 100 cubic feet of Gas. The Chartered Company, on the other hand, has failed but eight times out of sixty to conform to the provisions of the Act of Parliament. The average amount of sulphur in the Great Central Gas has been 23·39 grains per 100 cubic feet; in the Chartered Gas, it has been 17·15 grains; and the City Gas. 17·14 grains.

Lastly. I have to report that the pressure at

which the Gas has been supplied to the public has ranged from 1 inch of water to nearly 3 inches, the average pressure having been an inch and a half.

I remain, GENTLEMEN,

Your obedient Servant,

HY. LETHEBY, M.B.,
Gas Analyst for the City of London.

GUILDHALL,
December 4th, 1866.